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ABSTRACT

Concerned with those students in Connecticut who had completed eighth grate and sought to be admitted to regional vocational-technical schools, this study had as its objectives to: (1) determine the general characteristics of students being served by Regional Vocational Technical Schools in the State, and (2) determine to what extent the schools were serving the range of students seeking enrollment. A random sample from each of 14 schools of the 15 in the State was used. For analytical purposes, students were divided into two categories: those actually enrolled and those not enrolled. Findings include: (1) A significant difference was found between the enrolled and non-enrolled applicants on their trade choice, (2) There were no significant differences between the two groups on age, grade last completed, race, or sex, (3) Significant differences in family background were found between the enrolled and non-enrolled applicants, (4) Significant differences were apparent between the two groups in intelligence test scores, achievement test scores, grades repeated, personal characteristics, grades obtained, days absent, times tardy, and recommendations from the sending schools. Much of the difference evidenced between the enrolled and non-enrolled students can be traced to the inadequacy of information from the sending school as well as the failure of students to appear for testing and cannot all be attributed to the selection process. (Author/SN)

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A STUDY OF THE CHARACTERISTICS OF STUDENTS WHO SOUGHT ADMISSION TO CONNECTICUT REGIONAL TECHNICAL SCHOOLS IN 1971

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Storrs, Connecticut

March 1973

CONNECTICUT STATE DEPARTMENT OF EDUCATION
DIVISION OF VOCATIONAL EDUCATION
RESEARCH AND PLANNING UNIT
HARTFORD, CONNECTICUT

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Chapter One

INTRODUCTION

Background

The fifteen Connecticut Regional Vocational-Technical Schools make up a state-operated system of secondary trade schools providing primarily Trade and Industrial Education to students in all areas of the state. Students in eighth grade may opt to attend either a general or comprehensive high school or a Regional Vocational Technical School.

The basic purpose of this study is to describe some of the characteristics of the students who opted for enrollment in regional technical schools. The purpose for doing this study was to determine: 1) the general characteristics of students being served by Regional Vocational Technical Schools, and 2) to what extent the schools are serving the range of students seeking enrollment.

One must hasten to point out that the regional vocational-technical schools do not represent the sole opportunity for vocational education, or even the major opportunity for vocational education in Connecticut. There are also regional agricultural programs at the secondary level (also state-operated, but as part of a regular high school). Many high schools offer other vocational opportunities in Trade and Industry, Business Education, Distributive Education, Cooperative Work Experience programs, Health programs, Home Education, and a variety of exemplary programs.

At the post-high school level, regional vocational-technical schools offer Trade and Industrial Education and Health Education programs.

Also at the post-high school level four technical colleges offer a variety of engineering technician training programs. A new community college system is rapidly expanding its offerings in occupational education. At the adult level, the Regional Technical Schools offer apprentice training,

Trade preparatory and Trade supplementary programs. Three Skill Centers are providing job training for unemployed disadvantaged adults (one being operated for inmates of correctional institutions). Other programs include support to a variety of programs such as sheltered workshops, special programs for the disadvantaged, and others.

This study, thus, is concerned with a small but important aspect of Vocational Education in Connecticut: The students who have completed eighth grade and seek to be admitted to regional vocational technical schools.

All students who are accepted by these schools do not enroll (See Table I-A "Cancelled" and "Failing to Report"). Others who are qualified cannot be accepted. This is not because the regional schools do not want to serve them; rather, it is because the facilities, staff and finances are limited.

A less important restraint, but nevertheless a factor in limited enrollment, is the manpower needs of the state. The regional vocational-technical schools do not wish to train unduly large surpluses of people in various trade and industrial areas.

Because there are more applicants than can be accommodated in the regional schools, schools have set up admissions procedures. These procedures vary from school to school for at least two reasons: 1) some schools are able to accommodate most of the applicants, primarily those schools in more sparsely populated areas; others, primarily those in heavily populated areas, have high numbers of applicants, and can accept only a small portion of the applicants; 2) all schools do not offer the same programs. Students are not just admitted to schools, but many schools make an effort to select students interested in the programs offered by the schools.

Because this need for admission policies exists, it could be important to know if these policies are discriminating in certain ways. Additionally, simply reporting the characteristics of those seeking enrollment would be of

Table I-A

STUDENT ADMISSIONS REPORT*

(Basis for Weighting Sample)

School	Number of Applicants	Reported	Sample Weight (Enrolled)	Cancelled	Failed to Report	Qualified	Not Qualified	Total Non-Enrolled	Non-Enrolled Sample Weight	% Enrolled
1	777	351	2.5	33	29	120	244	426	5.1	47.8
**2	255	113	-	9	0	85	48	142	-	53.2
3	254	170	1.2	16	34	4	30	84	1.0	54.7
4	384	172	1.2	27	11	41	133	212	2.5	86.6
5	816	338	2.4	36	49	384	9	478	5.7	44.8
6	723	246	1.8	36	42	316	83	477	5.7	51.8
7	458	187	1.3	20	4	163	84	271	3.2	60.0
8	300	139	1.0	41	0	70	50	161	1.9	46.1
9	738	305	2.2	24	24	357	28	433	1.9	67.3
10	272	146	1.0	31	6	40	49	126	1.5	47.8
11	504	285	2.1	35	29	63	92	219	2.6	57.1
12	382	189	1.3	19	10	146	18	193	2.3	69.2
13	666	173	1.2	24	3	367	99	493	5.9	54.9
14	357	174	1.2	19	3	125	36	183	2.2	30.0
15	302	181	1.3	21	6	86	8	121	1.4	68.9
	7188	3169		391	250	2367	1011	4019		

*Adopted from Report of Connecticut State Department of Education
Division of Vocational Education. Series 1971-72
Vocational Research Letter no. RR-2 (Revised)

**not included in the study

little value in determining who is served by the schools and making some comparison with some other groups. It must be kept in mind, however, that students who are classified as non-enrolled are not just those who are refused admission, but those who change their minds, those who move, or for other reasons choose not to come, or cannot come even though they may have been accepted for admission or are qualified for admission.

This study, then, while designed to describe students who seek admission, does so by making comparisons of those who actually enroll to those who were not enrolled.

In addition, because the study was conducted after the first semester of 1971-72, it was possible to obtain data on the progress of many of the admitted students in the school. This information is also reported.

To be more precise the two groups are as follows:

a. enrolled students: ninth grade students who reported and were enrolled in the regional vocational-technical schools September of 1971

b. non-enrolled students: ninth grade students who applied but were not enrolled in the regional vocational-technical schools. This group is made up of four catagories (See Table I-A)

*1. Students who were accepted but cancelled their enrollment before school started.
*2. Students who were accepted but failed to report to the school
3. Students who were qualified but could not be enrolled because of limited space and staff.
4. Students who were not qualified.

Procedures

The group under study were those students who sought admission into the regional vocational-technical schools for the ninth grade in the fall semester of the 1971-72 school year.

The study was started in February of 1972. It is based on data collected from the application form which is required to be submitted by each student

*In general replacements for the "cancelled" and "failed to report" were drawn from the pool of "qualified." The replacement students are included in this report as "enrolled."

(see Appendix A). Because of the large number of students who sought admission, it was decided to take a random sampling of the students. For each school, a random sample of thirty students who were enrolled and thirty students who did not enroll was developed. The sample for each school was generated through a computer program (a further discussion of the sample will be found later in this chapter).

In order to collect the data, a Data Collection Form was developed (see Appendix B). It was tested and revised twice in cooperation with administrative personnel of one of the regional schools and with guidance personnel from two regional schools. Data collection procedures were developed and a training program for five graduate students was held in one of the regional vocational-technical schools using actual data.

These five graduate students constituted the nucleous of teams which went to each of the regional schools. With the complete and generous cooperation of personnel in each of the schools the teams were given the application forms of students. These were divided into two groups: one group of students who were enrolled, and another group of students who applied but were not enrolled. Each group was numbered sequentially and the random sample selected. No names of students were recorded to assure anonymity.

The collected data was returned to the university where each student's data was punched on to cards and transferred to tape for analysis.

Analysis of data was done by computer using the Tele Storage and Retrieval Program* which is especially designed for social science research statistical treatment. Both non-parametric and parametric statistics were used as appropriate.

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*Tele Storage & Retrieval System, Duke University, Durham, N.C., 1968, Revised, December, 1971.

Limitations

A. Problems Related to Data Collection

Certain problems are inherent in the data collection and treatment procedure. The complete reliance on the application form and other school records resulted in the fact that:

1. There were considerable missing data. The application form is first completed by the student who gives certain personal and family data. It is then given to the administrators of the school in which the student was enrolled which supplies evaluative data of the student's records in school. The form then comes to the regional vocational-technical school which adds data—more specifically—any pre-admission test scores resulting from admissions testing. For a variety of reasons information on some students was either not reported or some responses to questions were ambiguous. This occured at each step.

2. Since each sending school selects, maintains, and collects its data in its own way, some of the information, particularly that regarding standardized tests, was reported in different ways. This same problem existed in admission testing programs of the Regional Vocational-Technical Schools.

3. Some of the evaluative data supplied by the sending school is subjective on the part of the person who completes the form. The degree of familiarity this party had with the student varied from "unknown" to "intimately known." A further unsolved problem is the bias of the evaluator—bias regarding the student as well as bias the evaluator had about the regional technical schools.

4. Data maintenance by regional schools varied considerably. Most schools maintained their records very well, but a few had been careless in completing their sections on the form. One school could not supply the records for non-enrolled students. This school was dropped from the study. Where there were great voids of data on a student's record, the record was not used at all.

B. Problems Related to Data Collection and Preparation

1. While there were steps taken to assure that the transfer of data from the student records to the data collection form was accurate (every fifth one was done twice and if numerous errors were found, others were rechecked), there were errors made in the transfer of data. This is estimated at about 1 per cent though certain items had higher errors than others.

2. The coding process also was carefully checked, in a manner similar to the data collection; certain errors crept in and were undetected. This is estimated at about 1 per cent also.

3. The key punching resulted in a third problem. The data was key punched and verified, but an error in the magnitude of .5 per cent can be expected even with verification.

The total error in data collection is in the magnitude of 2.5 per cent—a tolerable error, since it extends over all students and all data. However, because of missing data the preciseness of the sample varies from variable to variable.

C. Problems Related to Treatment

1. The use of the random sampling procedure does not permit certain desirable applications. It does not permit such things as the determination of how many students come from each sending school. It does not permit any internal analysis of the school's student body as to how many students enter each program. Treatment of this sort would require a data collection of 100 per cent of the students who sought admission.

2. Because there were great varieties of standardization tests administered both by the sending schools and by the regional schools, plus the fact that the results of those tests were recorded in different ways (some by percentile, others by stanine, still others by grade level), there is considerable restriction on the utility of this data for analytical or descriptive purpose.

3. In order to treat certain data, information was categorized. Such categorization while not completely arbitrary provided some problem in placing responses in a correct category. For example, "comments" reported by sending schools were occasionally so ambiguous that the response could have been placed in two or even three categories.

There are, then, problems with the data, but no more so than any other social science research which relies on secondary sources of information. Within the framework of the data limitations, the data was carefully managed and is reliable. No efforts are made in this study to compare schools. Certain comparisons are not evaluative but descriptive as, for example, what schools used what tests for admissions. None of these comparisons are reported in this study.

D. Problems Related to the Sample

Thirty students who were enrolled and thirty students who were not enrolled as of September 9, 1971 were selected at random for each school. The sample technique was used principly because of time and money considerations. Peatman states:

> All statistics however are in a basic sense descriptive regardless of whether methods for the data to render are the data of sample or the complete data of census.[1]

The technique to draw the sample was to use the information contained in Table I-A. This table is an adaptation of a report from the State Department of Vocational Education. It provided inexact data, but this could be expected since students change categories from time to time, particularly in the first two months of school. The data was correct enough to serve the purpose of drawing a sample.

Table I-B

	1	2*	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTAL
Enrolled	30	30	30	30	29	30	30	30	29	30	30	30	29	30	30	447
Non-Enrolled	30	0	24	30	29	30	30	30	30	30	23	31	30	30	31	408
TOTAL																855

*not included in the treatment

With a computer random selection program a special sample was drawn for each school for both enrolled and non-enrolled students. Table I-B represents the actual numbers in the final sample. Where there are less than 30 it was because of inadequate or doubtful data. In two instances there were 31 students due to overzealous data collection. They were kept in the sample to help compensate for some records which could not be used. Two schools had only 23 and 24 student records respectively which were usable.

The decision to use the minimum number of 30 was to give adequate representation for each school. Peatman suggests:

> For a series of samples of less than 25 or 30 cases each, the form of the sampling distribution of any statistic derived therefrom will skew more and more from the normal curve, the smaller the size of the sample.[2]

---

[1] Peatman, G.P., Descriptive and Sampling Techniques, (New York: Harper and Brothers, 1947), p. 283.

[2] Peatman, op. cit., p. 324.

Since the possibility existed that comparisons between schools might be desirable, it was felt that at least 30 cases should be obtained.

But this creates a problem. Since all the schools are not the same size, and since schools vary in their admissions procedure, it became necessary to have each school represented in proportion to its size as compared to the total. Since 30 cases is considered minimal for reducing skewness, the process of stratification was used whereby samples of each school were weighted in terms of their size as compared to the enrollment of each school with the school with the smallest enrollment. (See Table I-C)

This weighting has obvious disadvantages. If a skewness exists in a large school sample, it will be exaggerated in the total. Yet, since there are fifteen schools, the effect of such skewness is not great. By drawing samples from each school, chance skewness for the entire sample is reduced.

Statistical Treatment

A. Testing for Randomness of Sample

In one school a collection of data on all students was made. For this school the two samples drawn for the study were compared to the rest of the students who had applied. No statistically significant differences occurred for any variable tested. (Table I-D)

B. Treatment of Data

Two types of treatment were given. Almost all variables, coninuous or categorical, were treated first with non-parametric data using the Chi Square test of significance. Continuous variables were also treated with a t-test, and a parametric test; both tests measure the significance of difference.

The reason for using the non-parametric statistical procedure on almost all data was because, first, it permits a visible tabular display of the data, more easily interpreted by persons with minimal training in statistics.

Secondly, it is a test which does not assume normal distribution and, thirdly, it is easily weighted.

Complete reliance on this technique, however, is dangerous in that it can be inadvertantly distorting. A basic rule for the Chi Square measure is that there must be at least five observations in each cell to give credence to the statistic. This means either collapsing the cells or using a special technique. A technique devised by F. Yates[1] consists of adding one-half to the smallest frequency of the table and adjusting the others so that the marginal totals will remain the same. Both of these techniques were used. Tables which show cells with frequencies below five were treated with the Yates technique. A few others were collapsed, i.e. several categories were combined.

Continuous variables were treated additionally with a t-test. Since the data does not deal with matched pairs or with two measures of the same individual, if the variance showed a considerable difference, a 'Separate Variance t Model' was used, rather than a pool. Where variances were not considerably different, a 'Pooled Variance t Model' was used.[2] No weighting was used in the t-testing, yet the results show that variables treated with both the weighted x^2 and the unweighted t-test usually yeilded the similar results. When they did not agree it obviously places the results in a position of doubt. On the assumption that the randomness in each school is an accurate representation of the students, and that the weighting represents the students in all the schools, the investigator is inclined to accept the Chi Square results.

Since the Tele Storage and Retrieval computer program does not have the Yates technique for Chi Square, and uses the pooled variance t model, the use of the Yates technique and the separate variance model were done by hand.

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[1]Yates, F. "Contingency Tables Involving Small Numbers and the Chi Square Test" Supplement to the Journal of the Royal Statistical Society, Vol. 1 (1934), pp. 212-235.

[2]Popham, James W. Educational Statistics; Use and Interpretations, Harper and Row; New York (1967), pp. 148-149.

Table I-C

WEIGHTED SAMPLE (SCHOOLS UNORDERED)

School	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	TOTAL
Enrolled	39	36	54	27	64	0	75	36	70	30	54	39	63	36	35	658
PCT.	.059	.055	.082	.041	.097	.000	.114	.055	.106	.046	.082	.059	.096	.055	.053	.326
Non-enrolled	43	24	171	45	156	0	153	75	165	57	96	71	60	66	177	1359
PCT.	.032	.018	.126	.033	.115	.000	.113	.055	.122	.042	.071	.052	.044	.049	.130	.674
TOTAL	82	60	225	72	221	0	238	111	235	87	150	110	123	102	212	2017
PCT.	.041	.030	.112	.036	.109	.000	.113	.055	.116	.043	.074	.055	.061	.051	.105	

*no enrollment data available

Table I-D

SAMPLE (ON SELECTED VARIABLES) COMPARED TO TOTAL APPLICANTS OF ONE SCHOOL

Variable	Sample M	Non-Sample N	D.F.	x^2	Significance level
Live with	52	125	9	4.75	N.S.
Grades					
English	35	91	6	5.846	N.S.
Mathematics	38	99	6	4.67	N.S.
Reading	24	50	6	3.72	N.S.
Fathers' S.E.S.	47	95	10	2.31	N.S.
Mothers' S.E.S.	43	101	10	1.50	N.S.
Personality Chars.					
1. Effort	55	116	4	1.53	N.S.
2. Behavior	55	116	4	4.29	N.S.
3. Responibility	55	116	4	5.55	N.S.
4. Punctuality	55	116	4	4.80	N.S.
5. Cooperation	55	116	4	3.40	N.S.
I.Q.	27	69	8	7.42	N.S.

Chapter Two

PERSONAL CHARACTERISTICS

The variables in this chapter relate to information about student's personal characteristics of age, race, sex, first and second choice of occupation, last grade completed, physical handicaps and hobby.

A. Age. Table II-A shows the distribution of ages as reported by the applicants. The bulk of students were 15 years of age as of September 5, 1971. This was calculated by determining the date of birth as reported by each student and subtracting the day, month and year from the date of September 5, 1971, the first day of school.

There is a significant difference between the two groups at the .001 level, the non-enrolled students being on the average older. The mean age of the accepted was 14.97, ranging from 12.00 to 19.6 years. For the non-enrolled sample, the mean age was 15.16 years with a range from 12.08 years to 18.58 years. Forty-two students were not included because of inaccurate data (most put in the wrong year of birth, i.e. 1971). A t-test with a score of 5.34 on this variable showed no significant difference. However, on the Chi Square test (weighted) there was a significant difference at the .001 level.

Table II-A

AGE (Weighted)

Enrolled vs. Non-enrolled

Age	12	13	14	15	16	17	18	19	25	TOTAL
Enrolled	6	2	116	348	126	26	1	2	4	631
Pct.	1.0	0.4	18.4	55.0	20.0	4.1	0.2	0.3	0.6	32.9
Non-Enrolled	6	10	110	567	436	128	25	5	5	1292
Pct.	0.4	0.8	8.5	43.9	33.7	9.9	1.9	0.4	0.4	67.1
TOTAL	12	12	226	915	562	154	26	7	9	1923
Pct.	0.6	0.6	11.7	47.6	29.2	8.0	1.4	0.4	0.5	

CHI SQUARE = 041.2868 8 DF, LEVEL OF SIGNIFICANCE $<$ .001

B. Race. Eight schools collected data on race. Table II-B-1 represents the race distribution for these schools only. There is no significant difference between the ratio of enrolled to the ratio of non-enrolled. Seven and nine-tenths per cent of those who sought admission were black, and 7.8 per cent of the total enrolled were black. For Spanish-speaking, 4.7 per cent sought enrollment and 3.7 per cent were enrolled.

The percentage of Blacks in Connecticut was 16.73 as derived from the 1970 census. Spanish-speaking represented 9.75 per cent (estimated as of 1973 from data in the State Vocational Plan), and Caucasian represented 73.52 per cent of the Connecticut population of 1970. The schools are not attracting, nor enrolling in these proportions. But there is no apparent discrimination. A non-Caucasian has just as good a chance of being enrolled as does a Caucasian.

The distribution by schools differ. Some schools accepted a larger proportion of non-Caucasian than Caucasian, others acted in reverse. This is related to the geographical location in racial groups. But for the system there is no significant difference in proportion between the various groups applying, and proportion enrolled.

It is likely that these percntages would decrease if all schools reported race, for those not reporting race tend to be rural schools where there are few or no Blacks or Spanish-speaking people and thus there would be for the total sample, a smaller percentage of non-Caucasians.

To illustrate this, a test of significance was applied to the entire sample. If we assume that schools not reporting race had no Black or Spanish-speaking people enrolled (which is untrue), the figures show a different picture (Table II-B-2).

Since this assumption is not accurate, we can merely report that enrolled Blacks constitute something between 5.6 per cent and 7.8 per cent, non-enrolled Blacks between 6.8 per cent and 7.9 per cent; enrolled Spanish-speaking

Table II-B-1

RACE—REPORTING SCHOOLS (Weighted)

Black Enrolled vs. Non-Enrolled

Enrolled	38	17	429	485
Pct.	07.8	03.7	88.5	29.6
Non-Enrolled	92	62	1004	1158
Pct.	87.9	05.3	86.8	70.4
TOTAL	130	89	1433	1643
Pct.	07.9	04.7	87.4	

CHI SQUARE = 5.30 4 DF, SIGNIFICANCE LEVEL = N.S.

Table II-B-2

RACE—ALL SCHOOLS (Weighted)

	Black	Spanish-Speaking	Caucasian	TOTAL
Enrolled	38	18	628	684
Pct.	05.6	02.6	91.8	32.1
Non-Enrolled	92	62	1206	1360
Pct.	06.8	04.6	88.7	67.9
TOTAL	130	89	1433	1643
Pct.	07.9	04.7	87.4	

CHI SQUARE = 5.83 LEVEL OF SIGNIFICANCE = N.S.

students between 2.6 per cent and 3.7 per cent, non-enrolled Spanish-speaking between 4.6 per cent and 5.3 per cent.

C. Sex. The schools are by nature male-oriented in the programs they operate. Yet, some females do enroll. They tend to opt for programs with greater opportunities for girls such as chef training. A few opt for such non-mechanical jobs as drafting. There are beauty culture and fashion design programs as well. It is not clear whether or not this group is included in this report. The percentage of women enrolled is 4.6 per cent. There is no significant difference between those enrolled and those not enrolled. (Table II-C)

Table II-C

SEX

Enrolled vs. Non-Enrolled

Sex	Male	Female	TOTAL
Enrolled	628	29	657
Pct.	95.6	04.4	32.6
Non-Enrolled	1293	64	1357
Pct.	95.3	04.7	67.4
TOTAL	1921	93	2014
Pct.	95.4	07.6	

CHI SQUARE = 0.9129 1 DF, LEVEL OF SIGNIFICANCE = N.S.

D. Trade Choice. When seeking enrollment students are asked to report their first and second trade choices. Their responses to this question vary greatly. Many of the choices are for occupational courses not offered by the schools. A Chi Square test was performed for the groups and showed a significance level of .001 for the weighted group and .05 for the non-weighted set. However, because of many cells with less than five, the tests are in doubt.

It does appear that this is not an important factor in enrollment. One might expect that students who experience interests related to the occupations taught. But this is not the case. For example of those who, for their first choice, chose auto mechanics, a larger percentage was rejected than was accepted. The same is true in architectural drafting, carpentry, machine, air conditioning, printing and others. This cannot be construed that this item wasn't considered in enrollment, for each of these occupational areas have limited space which would restrict acceptance if large numbers expressed this as an interest. It is not at all clear what this table represents.

Table II-D

TRADES

	First Trade Choice			Second Trade Choice		
	Enrolled	Enrolled	Total	Enrolled	Enrolled	Total
Auto Mechanics	118 .208	384 .315	502 .281	98 .200	22 .026	120 .091
Architectural Drafting	9 .015	25 .020	34 .019	10 .020	8 .009	18 .013
Carpentry	126 .223	309 .256	435 .243	109 .222	212 .258	321 .245
Electrical	98 .173	141 .115	238 .134	87 .177	210 .255	297 .226
Electronics	104 .181	127 .104	231 .129	65 .132	101 .123	166 .126
Machine	23 .040	47 .038	70 .039	36 .073	67 .081	103 .078
Mechanical Drafting	20 .035	23 .018	43 .024	21 .042	36 .043	57 .043
Air Conditioning	7 .012	57 .046	64 .035	29 .059	80 .097	109 .083
Printing	10 .017	43 .035	53 .029	16 .032	45 .054	61 .046
Food Services	20 .035	26 .021	46 .025	4 .008	8 .009	12 .009
Hair Dressing	0 .000	3 .002	3 .001	0 .000	0 .000	0 .000
Dental Assistants	2 .003	0 .000	2 .001	0 .000	3 .002	3 .002
Home Economics	4 .007	3 .002	7 .003	0 .000	0 .000	0 .000
Auto Body	2 .003	24 .019	26 .014	2 .004	6 .007	8 .006
Airplane Mechanics	4 .007	1 .000	5 .002	2 .004	0 .000	2 .001
Baking	8 .014	5 .044	13 .007	3 .006	11 .013	14 .010
Beauty Culture	6 .010	0 .000	6 .003	5 .010	12 .014	17 .012
Industrial Chemistry	4 .007	0 .000	4 .002	2 .004	0 .000	2 .001
TOTAL	565 .316	1218 .683	1783	489 .373	821 .626	1310

E. Last Grade Completed Before Application. The usual practice is for a student to enroll in the ninth grade, yet openings do arise at other levels and some students may choose to enroll in the regional schools even though they have completed one or more years of high school (9-12). (A few students reported that the last completed was seventh grade. This probably was because they were in eighth grade, answering the question "grade last completed," which would have been seventh. These responses were dropped from the test of significance.)

Table II-E shows no significant differences between enrolled and non-enrolled students.

Table II-E

GRADE LAST COMPLETED (Weighted)

Enrolled vs. Non-Enrolled

Grade	8	9	TOTAL
Enrolled	541	3	544
Pct.	99.5	0.5	48.8
Non-Enrolled	601	11	612
Pct.	96.4	3.6	51.2
TOTAL	1142	14	1156
Pct.	98.8	1.2	

CHI SQUARE = .72 1 DF, LEVEL OF SIGNIFICANCE = N.S.

F. Physical Handicaps. Schools from which students come are asked to report any physical handicaps. A variety of eight handicaps were reported. These included overweight, hearing, dental, asthmatic, allergy, nosebleeds, nervousness, and cerebral palsy. The analysis, however, is reduced to non-handicapped vs. handicapped for there were relatively few applying students who were reported as being handicapped. This is probably inaccurate, for schools frequently are unaware of handicaps unless they are obvious or reported. The report is based on school information, not medical reports, so it probably leaves much to be desired. Yet there is a significant difference between enrolled and non-enrolled. Only 1.2 per cent of those applying had reports of physical handicaps, but the school accepted less than half of these. This should not necessarily be considered as a negative attitude on the part of the school. Some handicaps are such that they result in some students being refused enrollment for their own protection.

Table II-F

PHYSICAL HANDICAPS
Enrolled vs. Non-Enrolled

Groups	Non-Handicapped	Handicapped	TOTAL
Enrolled	651	3	654
Pct.	99.5	0.5	65.4
Non-Enrolled	1313	20	1333
Pct.	98.5	1.5	67.1
TOTAL	1964	23	1987
Pct.	98.8	1.2	

CHI SQUARE = 39.2443 1 DF, SIGNIFICANCE LEVEL $\leq$ .001

G. Hobbies. Even though there is a significant difference between the groups, there is no particular pattern which emerges which could be related to enrollment or non-enrollment. If this were an important factor in the selectivity performed by counselors, one might expect students with hobbies somewhat related to the trades would be selected. This is not the case. Model Building, for example, would suggest an interest in mechanical skills. Yet the percentage difference between the two groups is only 4 per cent. The same observation can be made about mechanical hobbies. (Table II-G)

Nor are the schools selecting athletes. The percentage of enrolled who had competitive sports as a hobby is about 3 per cent less than those not enrolled.

Table II-G

Hobbies

Enrolled vs. Non-Enrolled (Weighted)

	Enrolled	Non-Enrolled	TOTAL
Model Building	166 .274	285 .231	451 .245
Collecting	43 .071	70 .057	113 .061
Electricity	25 .041	63 .051	88 .048
Woodworking	33 .054	60 .049	93 .051
Mechanical	50 .083	109 .088	159 .086
Competitive Sports	161 .266	360 .292	521 .283
Individual Sports	45 .074	118 .096	163 .089
Arts and Crafts	11 .018	30 .024	41 .022
Intellectual	53 .087	116 .094	169 .092
Other	19 .031	22 .081	41 .022
Total	606 .330	1233 .670	1839

CHI SQUARE = 15.29 DF 9, LEVEL OF SIGNIFICANCE = .05

Chapter Three
FAMILY BACKGROUND

Data about the families is collected on the application form which is signed by the parent or guardian, and schools were asked to report certain information about the home environment. Variables considered in this chapter are: number of siblings, home characteristics, with whom does the student live, father's occupational status, and mother's occupational status.

A. Number of Siblings. It would not be expected that the number of siblings would have any relationship to enrollment or non-enrollment. The mode for the total group is two siblings per applicant. It can be seen (Table III-A) that the students enrolled tend to come from smaller families. Seventy-one per cent of those enrolled come from families where the students had three or less brothers and sisters as compared to sixty one per cent of the non-enrolled having three or less brothers and sisters. This is a significant difference.

Table III-A

NUMBER OF SIBLINGS (Weighted)

Enrolled vs. Non-Enrolled

Groups	0	1	2	3	4	5	6	7	8	11	TOTAL
Enrolled	49	109	166	123	66	51	15	25	14	10	628
Pct.	.078	.173	.265	.195	.105	.082	.023	.040	.022	.016	.332
Non-Enrolled	76	145	295	250	191	132	68	34	21	49	1261
Pct.	.060	.115	.234	.198	.151	.105	.054	.027	.017	.031	.668
TOTAL	125	254	461	373	257	183	83	59	35	59	1889
Pct.	.066	.134	.244	.197	.136	.097	.044	.031	.019	.031	

CHI SQUARE = 419.7490 9 DF, SIGNIFICANCE LEVEL = .001

Mean:Enrolled = 2.85, Non-Enrolled = 3.38

B. Home Characteristics. Sending schools were asked to report whether or not the home environment was "not typical." This, for the most part, would be a subjective evaluation which would vary from school to school and student to student.

There is a significant difference between the groups—(See Table III-B). A larger percentage of students with "not typical" homes were not enrolled than were enrolled. This is probably not a function of admissions, and if not, suggests there may be some relationship between the variables used for admissions and home environment. A home environment may be related to grades, behavior and several other problems.

Table III-B

HOME ENVIRONMENT (Weighted)

Enrolled vs. Non-Enrolled

Groups	Typical	Not-Typical	TOTAL
Enrolled	601	56	657
Pct.	.915	.085	.326
Non-Enrolled	1194	166	1360
Pct.	.878	.122	.674
TOTAL	1795	222	2017
Pct.	.890	.110	

CHI SQUARE = 24.204 1 DF, SIGNIFICANCE LEVEL <= .001

C. With Whom Does a Student Live? Students reported whom they lived with. Here, too, there is a significant difference at the .001 level (See Table III-C). The most notable difference is that of the percentage living with both parents; the enrollees at 79 per cent with non-enrollees at 71 per cent. This, like home environment, probably cannot be interpreted as having any direct relationship to admission, but again, may be related to school grades, behavior and other factors used for acceptance.

Table III-C

WITH WHOM IS STUDENT LIVING? (Weighted)

Enrolled vs. Non-Enrolled

Groups	Both Parents	Mother	Father	Grand-Parents	Moth.Step Father	Fath.Step Mother	Guardian	Adopted	Foster Parent	TOTAL
Enrolled	475	76	16	2	22	3	3	3	1	601
Pct.	.790	.126	.026	.004	.036	.005	.005	.005	.002	.336
Non-Enrolled	847	215	25	14	53	4	7	6	13	1184
Pct.	.715	.181	.021	.012	.045	.003	.006	.005	.011	.664
TOTAL	1322	291	41	16	75	7	10	9	15	1786
Pct.	.740	.163	.023	.009	.042	.004	.005	.005	.008	

Compacting this table to four categories (Both parents, Mother, Father, and "Other" to eliminate the cells with less than 5, the Chi Square test with 3 degrees of freedom is 16.15. The level of significance is .001.

D. Fathers' Occupational Status. Fathers' occupations were reported by each student. These occupations were coded using the National Research Opinion Center socio-economic status ratings. There were considerable missing data on this item (662 of 822). The missing data were scattered throughout the schools for both enrolled and non-enrolled. It is therefore believed that this table is representative. Table III-D shows a significant difference between the two groups, while a t-test score of 1.64 shows significance at the .10 level.

The mean fathers' socio-economic status for enrollees is 62.77, for non-enrollees 60.78, with a smaller variance for enrollees than for non-enrollees. (See Table III-D).

Table III-D

FATHERS' SOCIO-ECONOMIC STATUS (Weighted)

Enrolled vs. Non-Enrolled

	Below 29	39	49	59	69	79	89	TOTAL
Enrolled	20	5	28	107	196	157	37	550
Pct.	.038	.009	.051	.194	.355	.284	.068	.348
Non-Enrolled	38	5	45	273	406	215	47	1029
Pct.	.037	.004	.043	.265	.395	.210	.046	.652
TOTAL	58	10	73	380	602	372	84	1579
Pct.	.038	.006	.046	.240	.381	.235	.053	

CHI SQUARE = 19.94 6 DF, SIGNIFICANCE LEVEL = .001

Mean: Enrolled=62.74, Non-Enrolled=60.78, Total=61.83

E. Mothers' Socio-Economic Status. As with fathers' economic status, there was considerable missing data, again scattered throughout the schools for both enrollees and non-enrollees. There is a significant difference on this variable. Substantial numbers of mothers were reported as engaging in no economic employment.

The mean of the economic status of enrol ees' mothers was 32.34, for non-enrollees 27.94. The variance of mothers of enrollees, unlike fathers' economic status, shows a larger variance (187.46) than for the non-enrollees' mothers (172.97). The t test showed a significant difference at the .07 level.

Table III-E

MOTHERS' SOCIO-ECONOMIC STATUS (Weighted)

Enrolled vs. Non-Enrolled

	0	29	49	59	69	79	TOTAL
Enrolled	278	12	5	68	89	107	559
Pct.	.498	.021	.008	.122	.159	.192	.328
Non-Enrolled	600	31	49	143	201	120	1144
Pct.	.537	.028	.020	.128	.180	.107	.672
TOTAL	878	43	54	211	290	227	1703
Pct.	.524	.026	.017	.126	.173	.135	

CHI SQUARE = 56.94 5 DF, SIGNIFICANCE LEVEL = .001

Chapter Four

SENDING SCHOOL INFORMATION

A. Intelligence Test Scores. Fifteen different IQ tests were reported by sending schools. 60.1 per cent of the students had taken the Lorge Thorndike Test. These were well distributed throughout the schools. The variation in numbers of students in schools was from 38 per cent to 89 per cent. The other tests were arbitrarily distributed among the students with Otis being the second most frequently used. Only two schools had ten or more students taking this test with no students from two schools having taken it, and five schools with less than three students having taken the Otis. Therefore, only scores on the Lorge Thorndike are used here.

The dates upon which the Lorge Thorndike was administered were also studied. Seventy-eight per cent of the students who took this test had taken it in 1968, 1969 and 1970. A test to determine whether or not the two groups had significant differences regarding the year administered indicated no significant difference. Dates were scattered throughout the schools randomly. Therefore, all students who had taken the Lorge Thorndike are included in this study.

Table IV-A-1 shows these scores and the comparison of enrolled and non-enrolled. There is a significant difference. The mean IQ score for enrollees was 103.7 and for non-enrollees 90.8. For both groups, the average IQ was 96.6.

A simple one-way analysis of variance was also run. (Table IV-A-2). This also shows a significant difference between the groups.

As reported, this represents only 60.1 per cent of the students and it is possible, though not likely, that sending schools discriminate on the selection of their tests, possibly based on the location, character of student body, kind of school (middle or eighth-graded) or some other characteristic. This was not

studied, but it could result in a bias if, for example, only non-urban schools used this test.

Table-IV-A

IQ SCORE—LORGE THORNDIKE ONLY (Weighted)
Enrolled vs. Non-Enrolled

IQ Score	75	80	85	90	95	100	105	110	115	120	125	140	TOTAL
Enrolled	1	3	12	37	36	46	62	41	44	25	22	6	335
Pct.	.004	.010	.034	.111	.106	.136	.186	.123	.130	.075	.067	.018	.392
Non-Enrolled	31	58	68	90	109	56	40	36	8	15	6	3	520
Pct.	.060	.112	.130	.173	.210	.108	.078	.069	.015	.028	.011	.006	.608
TOTAL	32	61	80	127	145	102	102	77	52	40	28	9	855
Pct.	.038	.072	.093	.149	.169	.119	.120	.090	.060	.047	.033	.010	

CHI SQUARE = 900.1848 11 DF, SIGNIFICANCE LEVEL = .001

Table IV-A-2

IQ SCORES—LORGE THRONDIKE ONLY (Non-Weighted)

Group	N	Mean	Standard Deviation	Variance
Enrolled	206	103.703883	11.481679	131.828960
Non-Enrolled	169	90.792899	11.786733	138.927092
TOTAL	375	97.885333	13.268118	176.042966

SOURCE	DF	
Between	1	114.610400360
Within	373	* 10.705624706 = T

*Significant at .001

B. Achievement Test Scores. Thirteen different achievement tests were reported by the sending schools. These were widely distributed. The most frequently administered test was the Iowa Test of Basic Skills. But this represented only 38 per cent of the total students, and 52 per cent of those who had tests reported. All schools are represented, but one school had only one student who had taken this test, another only eight students. The rest varied from 15 to 45. Table IV-B shows mean, standard deviation, T scores and Chi Square test scores on a comparison of enrolled and non-enrolled students.

The test was administered for 42 per cent in the seventh grade and 39 per cent in the eighth grade and 19 per cent earlier, so that one would expect a mean around seventh grade. For all tests, the enrollees scored either just below or just above the seventh grade, but the non-enrollees had mean scores around the sixth grade level. All mean scores are generally below grade level for the total group.

On all the subtest scores and the total there were significant differences on both the t test score and the Chi Square.

Table IV-B

ACHIEVEMENT TEST SCORES—IOWA TEST OF BASIC SKILLS

(Unweighted)

Enrolled vs. Non-Enrolled

Test Sub Score		N	Mean	Standard Deviation	T	Significance Level	Chi Square	DF	Sig.	Means for Total Group
Reading	E	141	6.8	1.648	5.25	.001	200.472	6	.001	6.65
	N	116	5.8	1.383						
Vocabulary	E	121	7.2	1.583	6.08	.001	179.637	6	.001	6.1
	N	107	5.9	1.527						
Language (Total)	E	141	6.7	1.503	7.80	.001	92.492	6	.001	6.6
	N	120	5.3	1.257						
Work Study	E	136	7.1	1.464	5.79	.001	66.315	6	.001	6.5
	N	118	6.1	1.249						
Math (Total)	E	137	6.9	1.352	6.22	.001	85.754	6	.001	6.7
	N	118	5.9	1.236						
Social Studies	E	47	6.7	1.268	3.49	.001	(Variance too small)			6.2
	N	55	5.8	1.343						
Science	- - - - - - - - - - - - - Sample too small - - - - - - - - - - - - - - - - -									
Math Problems	E	43	6.9	1.117	4.65	.001	10.018	4	.05	6.3
	N	54	5.8	1.164						
Math Concepts	E	46	6.6	1.689	2.50	.006	23.171	2	.001	6.3
	N	27	5.6	1.631						
Spelling	E	141	6.9	1.65	5.25	.001	24.066	5	.001	6.3
	N	116	5.8	1.39						
Grade Equivalent (Total)	E	147	6.9	1.369	6.24	.001	61.188	5	.001	6.3
	N	121	5.9	1.369						

C. Grades Repeated. The reporting on this question by the sending schools was not clear. Some responses reported the number of times a student repeated a grade, others reported which grade had been repeated. If anything was reported, the student was considered to have repeated one or more grades. Table IV-C illustrates the number of students who did or did not repeat grades. There is a significant difference—non-enrollees have a higher percentage of students who repeated grades.

Table IV-C

GRADES REPEATED (Weighted)

Enrolled vs. Non-Enrolled

	No Repeats	Repeated 1 or More Grades	TOTAL
Enrolled	534	120	654
Pct.	81.3	18.7	32.6
Non-Enrolled	890	470	1360
Pct.	65.5	34.5	67.4
TOTAL	1424	590	
Pct.	70.6	29.4	

CHI SQUARE = 12.54 1 DF, SIGNIFICANCE LEVEL = .001

D. Personal Characteristics. Schools were asked to give a subjective evaluation of each student seeking enrollment. This was done on a five point scale using five different criteria: 1) effort, 2) behavior, 3) responsibility, 4) punctuality, and 5) cooperation.

On each of the personal characteristics the mean of the enrolled group was higher than the mean of the non-enrolled group (See Table IV-D). Tests of significance of difference, both the t test and the Chi Square show significance of difference between the group on each criteria.

Table IV-D

PERSONAL CHARACTERISTICS

Enrolled vs. Non-Enrolled

		Unweighted					Weighted			
		N	Mean	Variance	T	Level of Significance	Total Group Mean	x^2	DF	Significance
'fort	E	342	3.35	.72	7.29	.001	3.13	48.71	4	.001
	N	325	2.88	.66						
·havior	E	342	3.56	.499	8.23	.001	3.33	81.98	4	.001
	N	326	3.08	.618						
·sponsibility	E	342	3.49	.50	9.19	.001	3.23	75.44	4	.001
	N	327	2.96	.60						
nctuality	E	341	3.51	.47	7.04	.001	3.32	58.07	4	.001
	N	327	3.13	.54						
operation	E	339	3.61	.54	7.33	.001	3.39	60.39	4	.001
	N	326	3.15	.72						

E. School Grades. The method and time of reporting school grades varied from school to school. The school is asked to indicate a grade by marking period or give a final grade. The grade recorded for purposes of analysis was the last marking period reported by the sending school. Since the different marking periods occurred over the whole group, one may assume that their differences are distributed randomly over the whole group and grades can be examined. Mean grades for each subgroup are reported in Table IV-E.

Schools have different ways of marking. The schools also report the lowest passing grade. Using this information, a scale of one to five was set for each school with five being the highest grade. For schools with letter grades, A was assigned five, B assigned four, etc. F was assigned one as were grades under the passing grade in other marking systems.

Schools offer different courses so that there are varying numbers of students represented for each subject. English, Science, Mathematics (arithmetic), and Social Science have the largest numbers of student grades reported.

Only Music showed no significant differences on both the t test and Chi Square. Art and physical education showed no significant difference on the t test, but did show a significant difference on the Chi Square test. All other grades showed a significant difference on both tests of significance. Where significant differences occured, the enrollees had higher mean values than the non-enrollees.

Table IV-E

SCHOOL GRADES

Enrolled vs. Non-Enrolled

	Unweighted						Weighted		
	N	Mean	S.D.	Variance	T	Level of Significance	x^2	DF	Level of Significance
Reading	191 174	3.33 2.95	0.90 .131	0.80 1.73	3.26	.001	39.75	4	.001
English	362 324	3.18 2.76	0.88 1.17	0.77 1.38	5.34	.001	54.17	4	.01
Spelling	110 90	3.62 3.08	1.16 1.27	1.34 1.62	3.13	.001	20.86	4	.001
Science	362 318	3.17 2.86	0.90 1.26	0.82 1.59	3.70	.001	44.19	4	.001
Math	367 325	3.19 2.62	1.01 1.17	1.03 1.38	6.82	.001	56.93	4	.001
Social Science	339 310	3.16 2.92	1.02 1.23	1.03 1.50	11.20	.001	24.95	4	.001
Geography	60 37	3.42 2.65	1.13 1.09	1.29 1.17	3.28	.001	14.14	4	.01
Music	114 115	3.32 3.59	1.16 1.56	1.34 2.42	1.47	N.S.	11.31	4	.02
Art	130 126	3.77 3.66	1.10 1.30	1.23 1.68	.73	N.S.	8.64	4	N.S.
Industrial Arts	170 157	4.05 3.81	1.02 1.22	1.04 1.51	1.91	.028	12.69	4	.05
Physical Education	172 184	3.92 3.83	1.14 1.40	1.30 2.26	0.65	N.S.	16.46	4	.01

F. Days Absent. Table IV-F illustrates the difference between the two groups regarding absences. While there is a significant difference between the groups, a larger percentage of non-enrolled students had no absences than did the enrolled. Yet the mean number of days absent for non-enrolled is 4.57, for the enrolled 3.41.

Table IV-F

DAYS ABSENT (Weighted)

Enrolled vs. Non-Enrolled

Days Absent	0	1	2	3	4	5	6	7	8	9	10	11	12	13	16	TOTAL
Enrolled	350	30	40	41	14	22	18	22	15	26	12	5	9	18	21	643
Pct.	.546	.047	.062	.063	.022	.035	.028	.034	.023	.041	.019	.007	.013	.028	.032	.330
Non-Enrolled	736	82	50	45	47	45	40	29	26	16	22	28	28	45	71	1310
Pct.	.565	.063	.038	.034	.036	.034	.031	.022	.020	.012	.017	.021	.021	.035	.054	.670
TOTAL	1086	112	90	86	61	67	58	51	41	42	34	33	37	63	92	1953
Pct.	.559	.058	.046	.044	.032	.034	.030	.026	.021	.022	.018	.017	.016	.032	.047	

CHI SQUARE = 468.10 14 DF, SIGNIFICANCE = .001

T = 1.81 L.S. = .03 Mean: Enrolled = 3.46, Non-Enrolled = 4.56

A t test reveals a t score of 23.6, significant at the .001 level.

G. Tardiness. Tardinesses were reported by the sending schools and are illustrated in Table IV-G.

Table IV-G

NUMBER OF TIMES TARDY (Weighted)

Enrolled vs. Non-Enrolled

Times Tardy	1	2	3	4	5	6+	TOTAL
Enrolled	560	11	9	8	7	19	614
Pct.	91.2	1.7	1.4	1.3	1.1	3.0	3.12
Non-Enrolled	1169	45	47	15	19	58	1353
Pct.	86.4	3.5	3.4	1.1	1.4	4.2	68.8
TOTAL	1729	56	56	23	26	77	1967
Pct.	87.9	2.8	2.8	1.1	1.3	3.9	

CHI SQUARE = 15.30 DF 4, LEVEL OF SIGNIFICANCE = .01

Mean: Enrolled = 0.659, Non-Enrolled = 0.92

While the weighted Chi Square test shows a significant difference at the .01 level, an unweighted t test of 1.022 is not significant. If the weighted scores are more representative of the students than the unweighted scores, it probably is a reflection of some interaction with variables used for selection. It is doubtful that this varible would have much weight in the admission process, unless a student showed the frequency to be so high as to indicate habitual tardiness.

H. Recommendation of Sending School. Schools were asked to check whether a student was highly recommended, recommended with qualifications or not recommended. Table IV-H-1 shows the reports for enrollees or non-enrollees. There is a significant difference between the two groups; the enrolled students were likely to come from the highly recommended, or recommended with qualifications. The non-enrolled had only 39.1 per cent in the highly recommended category.

Reversing the table we see that 50.3 per cent of those who were "highly recommended" were accepted while 80.2 per cent of the "recommended with qualifications" and "not recommended" respectively, were not admitted. (Table IV-H-2).

Table IV-H-1

RECOMMENDATION OF SENDING SCHOOL (Weighted)

Enrolled vs. Non-Enrolled

	Highly Recommended	Recommended With Qualification	Not Recommended	TOTAL
Enrolled	372	130	2	504
Pct.	73.8	25.8	00.4	34.9
Non-Enrolled	367	522	49	938
Pct.	39.1	55.7	05.2	65.1
TOTAL	739	652	51	1442
Pct.	51.2	45.2	03.6	

CHI SQUARE = 180.88 2 DF, SIGNIFICANCE LEVEL = .001

Table IV-H-2

Recommendation of Sending School: Kinds of Recommendation

	Enrolled	Non-Enrolled	TOTAL
Highly Recommended	372	367	739
Pct.	50.3	49.7	51.2
Recommended With Qualification	130	522	652
Pct.	.198	80.2	45.2
Not Recommended	2	49	51
Pct.	14.7	95.3	3.6
TOTAL	504	938	1442
Pct.	.349	.651	

I. Sending School Comments. Schools are asked to write comments about each applicant. The number and kinds of comments made varied widely. These were catagorized as seen in Table IV-I-1. No test of significance was made for this table since there were too many cells with small numbers. The table was further reduced to two catagories, positive comments--those which suggested good attitudes, hard work, high motivation, etc., and negative comments—emotional problems, behavioral problems, poor study habits and similar statements. This is displayed in Table IV-I-2.

Here there was a significant difference. The enrolled students were more likely to have positive comments than the non-enrolled.

Table VI-I-1

Sending School Comments (Weighted)

Enrolled vs. Non-Enrolled

Comment	Positive Attitude	Negative Attitude	Emotional Problem	Mechanically Inclined	Poor Behavior	Poor Study Habits	Good Academically	Poor Academically	Good Home	Other	TOTAL
Enrolled	99	25	12	32	1	7	85	34	3	2	300
Pct.	33.0	08.3	04.0	10.6	00.3	02.3	28.3	11.3	01.0		00.6
Non-Enrolled	180	65	17	97	13	26	98	80	30	6	612
Pct.	29.4	10.6	02.7	15.8	02.1	04.2	16.0	13.0	04.9	00.9	67.2
Total	279	90	29	129	14	33	183	114	33	6	912
Pct.	30.5	09.8	03.1	14.1	01.5	03.6	20.0	12.5	03.6	00.6	

Table IV-I-2

Condensed Sending School Comments (Weighted)

Enrolled vs. Non-Enrolled

Comments	Positive	Negative	Total
Enrolled	219	81	300
Pct.	73.0	27.0	32.8
Non-Enrolled	405	207	612
Pct.	66.1	33.9	67.2
TOTAL	624	288	912
Pct.	68.5	31.5	

CHI SQUARE = 4.742 1 DF, SIGNIFICANCE LEVEL = .03

Chapter Five

ENROLLED STUDENTS

In gathering the information used in this study, data about enrolled students after they were enrolled was also gathered. This information includes: 1) entrance test scores, 2) grades, 3) attendance, and 4) trade choice after exploration. No analysis of this data is attempted; rather, it is presented here as descriptive data. (See Appendix C for source of data form).

A. Entrance Tests. The most frequently used entrance test used by the Vocational Technical Schools is the Differential Aptitude Test (DAT). But different schools use different parts of the test. Only two scores are reported here, both with less than half of the total group. Therefore, the figures should be treated with care. Table V-A-1 shows the mean and standard deviation for the Mechanical and Numerical test score of the DAT.

The mean for the Mechanical Test scores is about that of the ninth grade population, but the group scored lower than the mean of the ninth grade population on the Numerical Test.

Table V-A-1

DAT TEST SCORES

	N	M	Standard Deviation
Mechanical	156	49.03 %ile	24.78
Numerical	42	38.29 %ile	24.75

A variety of reading tests were administered by the school. The Gates reading test was most frequently administered. The results are shown in Table V-A-2.

These tests, administered at the beginning or even before the first semester, have a mean which is at or slightly above grade level. This includes only about one-third of the total and therefore cannot be considered representative.

Table V-A-2

READING TEST SCORES

	N	Mean	S.D.
Speed	123	8.75	2.61
Vocabulary	141	8.43	2.48
Comprehension	141	9.12	2.73

B. Grades. Grades were reported on a five-point scale, five being the highest, one being failure. Table V-B shows the spread on each course as well as the mean and standard deviation.

The reason for the small number of grades in "trade" is because at the time the data was collected most students were still in the exploratory program. The grades appear to be about where one would expect. Grades tend to skew a normal curve upward (it is usual that there are more A's than F's in schools with such a grading system).

Table V-B

GRADES FOR SUBJECT (Unweighted)

	1	2	3	4	5	Total	Mean	S.D.
Trade	1	9	36	18	12	76	3.42	0.99
Math	47	78	106	83	70	384	3.16	1.33
Science	35	87	129	81	54	386	3.13	1.30
English	27	61	141	103	49	379	3.30	1.29
Social Studies	26	84	105	110	63	388	3.32	1.30
Blue Print Read	40	53	102	108	40	343	3.19	1.23
Physical Education	19	18	64	99	144	344	4.44	1.60

C. Attendance. Since the collection of data occurred over a four-week period, the information regarding attendance is inconclusive. It represents roughly one and one-half semesters. The figures in Table V-C disclose the findings. There were 161 students or 40.9 per cent who had no absences reported and 299 or 71.7 per cent who had no tardinesses of a group of 417

Table V-C

ATTENDANCE

	N	Mean
Days Absent	394	3.63 days
Times Tardy	417	1.04 times

D. Consistency of Trade Choice. Before entering the school, students are asked to indicate two trade choices. At the completion of the exploratory program they are again asked to make a first and second trade choice.

Table V-D shows there were only 189 of the students who had made a choice after the exploratory experiences, the other students were still in the exploratory period when the data was collected. The trade choice after completion does not necessarily mean that students are enrolled in that choice. It merely means they have made the choice. This table shows a high consistency between first and second choices. 50.3 per cent remained with their first choice, only 8 per cent made choices different than the two choices they made on entering school.

Table V-D

COMPARISON OF TRADE CHOICE, FIRST AND SECOND

Original Choice	Second Choice		Percentage
First Selection	Same as First Selection	95	50.3
Second Selection	Same as First Selection	29	15.3
First Selection	Same as Second Selection	18	9.5
Second Selection	Same as First Selection	32	16.9
Selected Neither First Nor Second Choice		15	
	TOTAL:	189	

Chapter Six

SUMMARY AND CONCLUSIONS

This study was undertaken to study students who applied to the Connecticut Regional Vocational Schools in September of 1971. According to the report of the State Division of Vocational Education entitled Student Admission Report—September 1971 (Vocational Education Letter No. RR-2, Revised), 7188 students applied for admission into the fifteen schools at that time. Of that number, 3169 were enrolled and 4019 were not enrolled.

Because the study was limited in time and money, it was not possible to collect information on all students. It was therefore decided to take a random sample from each school. Students were divided into categories: 1) those actually enrolled, and 2) those not enrolled. Thirty students from each group were randomly selected for each school. Because one school could not provide data on students not enrolled, it was dropped from the sample. The study, therefore, involves fourteen schools.

To make the sample representative of the proportion each school had of the total enrollment, where possible, the data was weighted so each school's sample represented its proportion of the total.

The study is basically a comparison of the enrolled and the non-enrolled applicants. This was done to determine if significant differences existed between the two groups.

Because the schools have a limit to their enrollment (because of space, staff and finances), all students cannot be enrolled, even though many of the non-enrolled would qualify for admission. While only 3169 were enrolled, 379 of the qualified cancelled their acceptance and 235 failed to report. In most instances these were replaced by qualified students. These two groups represent 12.8 per cent of the 4019 who were not enrolled. Some 1011, or 25.1

per cent of the total applicants did not qualify.[1] There are, then, actually four groups of non-enrolled: 1) those accepted but cancelled (9.7% of the non-enrolled), 2) those accepted but failed to report (6.2% of the non-enrolled), 3) those qualified but because of space and other limitations could not be enrolled (59.0% of the non-enrolled), and 4) those who would not qualify (25.2% of the non-enrolled). These four groups were combined for this study as: "non-enrolled" students. Schools enrolled roughly three of every seven who applied and three of five who qualified. The result of the admissions process is the enrollment of those with the greatest chance of success (assuming that success in one school predicts success in subsequent schools). Almost all indications of this study confirm that this is what occured.

The study is broken down into three categories: 1) personal characteristics, 2) family characteristics, and 3) sending school information. A fourth part of the study is concerned with some of the characteristics of the students after they enrolled.

Summary of findings:

a. Personal characteristics

There was a significant difference between the enrolled and non-enrolled applicants on the trade choice which applicants made, and on enrollment of physically handicapped.

The differences of first and second trade choice is not particularly revealing. Differences probably arise from such items as the fact that some persons were choosing occupations which were not offered, and that large numbers were choosing occupations which had limited enrollment opportunities. What influence the trade choice had upon a

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[1] Student Admission Report: September, 1971, Vocational Research Letter No. RR-2 Revised.

student's being enrolled or not is not clear.

The significant difference between the groups relative to physically handicapped indicated that only 1.5 per cent of the total enrollment were physically handicapped. Of these only 15 per cent were enrolled. (One cannot fully explain the failure of physically handicapped to apply. It may be that youth with physical handicaps opt themselves out, recognizing their own limitations). The reason that few were selected is possibly related to safety, though this is not clear.

There were no significant differences between the two groups on "Age," "Grade Last Completed," "Race," or "Sex." This non-significance is important to note. It indicates, particularly for race and sex, that there is no discrimination taking place in the admissions process on these rather controversial variables. Another item of note, however, is that between 6.8 per cent to 7.9 per cent of Blacks and 4.6 per cent to 5.3 per cent Spanish-speaking students sought enrollment. This is below the percentages each of these groups is of the total population. Based on information received from the Social Science Data Center of the University of Connecticut Census Information, 16.7 per cent of Connecticut's population is Spanish-speaking. That more Blacks and Spanish-speaking do not seek enrollment may reflect the aspirations of Blacks or Spanish-speaking enrolled in grade school who may not be interested in trades as an occupational life, or it may reflect a perception they have of the schools. There are probably a variety of reasons why they do not apply. This is not clear. It is known that several schools have made extensive efforts to enroll Blacks and Spanish-speaking students.

Only 4.6 per cent of those who sought enrollment were females. This seems very low but quite traditional, for most of the occupations being taught in the schools are traditionally male occupations. There are, however, a number of traditionally female courses offered by the schools but these do not start at the ninth grade. Health occupations, for example, are open to students who have graduated from high school.

In regard to age, since almost all applicants come from the eighth grade, there is no significant differences between the two groups.

b. Family background

Family background is very infrequently, if ever considered in a selection process. Yet it appears that the admissions procedures are in some ways related to the family background. It was found that there were significant differences on:

1) Size of family (enrolled averaged 2.9 brothers and sisters, while the non-enrolled averaged 3.38);
2) Home environment (91.5 per cent of the enrolled came from "typical" homes, while 87.8 per cent of the non-enrolled came from "typical" homes);
3) Adults with whom the student lives (79.0 per cent of the enrolled lived with both parents while 71.5 per cent of the non-enrolled lived with both parents);
4) Fathers' socio-economic status (the mean of 62.77 for fathers of the enrolled, and 60.78 for fathers of the non-enrolled);

5) Mothers' socio-economic status (mean of the mothers of the enrolled was 32.34, and of the mothers of the non-enrolled 27.94).

c. Sending school information

This information is probably the most influential in the admissions practice. It is supplemented by pre-admissions testing done in some of the regional vocational-technical schools. The testing programs of the schools are so diverse, however, that no meaningful data, representative of the system, could be used.

There were significant differences on almost all variable studied. These include:

1) Intelligence test scores; Lorge Thorndike (enrolled students' mean score was 103.7; for non-enrolled students, 90.79);

2) Achievement tests—the Iowa Test of Basic Skills showed significant differences on:

a) Reading (enrolled grade equivalent 8.0; non-enrolled 5.8);

b) Vocabulary (enrolled grade equivalent 7.2; non-enrolled, 5.9);

c) Language (enrolled grade equivalent 6.7; non-enrolled, 5.3);

d) Math total (enrolled grade equivalent 6.9; non-enrolled, 5.9).

e) Math problems (enrolled grade equivalent 6.7; non-enrolled, 5.8);

f) Math concepts (enrolled grade equivalent 6.7; non-enrolled, 5.8);

g) Spelling (enrolled grade equivalent 6.6; non-enrolled, 5.6).

There were two areas of the test which had so few students the results cannot be considered as representative. These were Social Studies and Science. The "Total Grade Equivalent" was significantly different on both the t test and Chi Square test (enrolled grade equivalent 6.9; non-enrolled, 5.8).

All sections of the tests had the enrolled students with a higher grade equivalency than the non-enrolled. The mean for the enrolled group on each of the tests varied from 6.6 to 7.2;for the non-enrolled, from 5.3 to 5.9. Since the tests were generally administered over a range from the sixth grade or beginning of the eighth grade, the means, particularly of the enrolled students, are approximately at the norm for the group.

3) Grades repeated; 84 per cent of the enrolled had not repeated any grade while 65.3 per cent of the non-enrolled had not repeated any grade;

4) Personal Characteristics; a five-point scale on the characteristics of Effort, Behavior, Responsibility, Punctuality, and Cooperation was used. On all these items there were highly significant differences on both the t test and the Chi Square test. The enrolled group had consistently higher averages than the non-enrolled group.

5) On grades obtained in the sending school the enrolled consistently scored higher than the non-enrolled on all but one subject, Music, where there was no significant difference. Physical Education and Art were not significantly different on the t test but were on the Chi Square test. On all others there were significantly different scores on both the t test

and the Chi Square test. The enrolled scored higher on every subject.

6) Days absent; enrolled students had a mean of 3.46 days of absence, while the non-enrolled had a mean of 4.56. This was a significant difference between the groups.

7) Times tardy; enrolled students had a mean of .65 times tardy, while the non-enrolled had a mean of .92 times. There was a significant difference between the groups.

8) Each school was asked to make a recommendation regarding enrollment on a three-point scale: a) highly recommended, b) recommended with qualifications, and c) not recommended. 50.3 per cent of those highly recommended were accepted, while 95.3 per cent of those not recommended were not enrolled. To report this another way, 74.7 per cent of those who were enrolled were highly recommended, while only 39.1 per cent of the non-enrolled were highly recommended.

Enrolled students

1) Entrance tests—Two tests were studied, two parts of the DAT and three parts of the Gates reading test. While these tests are not given in all schools, they are the most frequently used. On the mechanical part of the DAT, the students scored a mean percentile of 49.03, while on the mathematics test they scored a mean of 38.29. The latter is below the mean of the general population.

On the Gates reading test the enrolled group scored a mean equivalent of 8.75 on speed, 8.43 on vocabulary, and 9.12 on comprehension. This is within the expected range based on the time the test was taken, immediately after or shortly before

completing eighth grade.

2) On grades in the regional vocational-technical schools, students averaged slightly above what could be interpreted as a "C".

3) Attendance—At the time of data collection, which extended over four weeks in the middle of the second semester, the students were averaging 3.63 days absent and 1.04 times tardy. 40.9 per cent of the students had had no absences and 71.7 per cent had no tardinesses.

4) Consistency of trade choice—When students enrolled they were asked to make two occupational selections. Upon completion of the exploratory program they were asked to make three job choices. The study, however, concerned itself with only the first two of these three choices. The results show that there is a high consistency of occupational choice. Only 8 per cent of those occupations chosen the second time were different from either of those they chose on enrollment.

e. A word about missing data—

Non-enrollees consistently had more data missing on almost all variables. This was generally randomly spread among the schools so it would not seriously influence the findings. But the significance may lie in the fact that if critical data is missing (data used for selection) it could adversely influence the selection decision, particularly if the information from the sending school was missing.

Other missing data also varies but at a lower level, in the

order of 3-8 per cent with differences of 2-3 per cent between enrolled and non-enrolled. There was more missing data for the non-enrolled.

Table VI-A compares the two groups on data missing on variables based on data from the sending schools. No tests of significance were made. It is displayed here merely to indicate that a problem may exist.

Table VI-A

MISSING DATA

	Enrollees: N = 414 % Missing Data	Non-Enrollees: N = 408 % Missing Data	Diff. in %
IQ Test Scores	17.8	29.9	12.1
Achievement Test	21.9	30.1	8.2
Recommendation of Sending School	23.1	31.1	8.0
Personal Characteristics	17.6	19.8	2.2
Grades	11.3	20.6	9.3

Some of the regional vocational-technical schools have a pre-testing program requiring all applicants to take selected tests before they enroll. These testing programs vary so much from school to school that no meaningful data could be drawn from them. It was found, however, on the DAT Mechanical, that 156 enrolled students had taken the test, but only 40 non-enrollees had taken the test. We do not know to what extent the DAT Mechanical test was administered as a pre-entrance test. Some schools

may administer it after students are enrolled, which would account for much of the difference. But this does give rise to the possibility that students who do not take the entrance test may reduce their chance of enrollment.

Considering these and other problems, differences between enrolled students and non-enrolled students are not the sole result of the selection processes of the schools. First, 12.8 per cent of those admitted do not actually enroll. When substantial amounts of data are missing from the application forms, the schools cannot give an adequate evaluation. Finally, if students fail to appear for pre-enrollment testing, significant data needed for admission is missing.

Part of the problem of many students not being enrolled can be traced to the inadequacy of information from the sending school, as well as the failure of students themselves to appear for testing.

CONCLUSIONS

The students who are seeking enrollment in vocational-technical schools are, in general, students below or equal to the mean of all high school students on various variables (IQ and achievement test scores were slightly below the mean for all high school students; grades were at about the mean for all high school students; fathers' and mothers' socio-economic status at about average for society).

From the group of students who seek enrollment in Vocational Regional Technical Schools, the ones which might be termed the "better" students are enrolled. These "better" students more nearly strike the norm for the general population than the group of applicants.[1] This is not too clear since we have little definitive data about the whole ninth grade population in Connecticut. What we can say with considerable assurance is that on a large number of variables, particularly those of school achievement, test scores, familial environment, and personality characteristics, the enrolled students score significantly higher than the non-enrolled students. Yet it appears that as compared with the total population, the enrolled students are not "elite" as a group. Contrarily, they seem to represent a fairly normal distribution of high school student bodies. In some ways they represent some differences. For example, only 14.6 per cent go on to post-high school education, while for the state, while 41 per cent of high school students go on to a four-year college. 69.2 per cent of the 1970 high school seniors in Connecticut high schools reported that they planned to go on to school.[2]

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[1] In a study comparing ninth grade vocational students from Connecticut Regional Technical Schools to ninth grade students of surrounding high schools, it was found that no difference existed between the two groups on fathers' socio-economic status or upon students' self-concepts.

Rhinfield, R.M., and Purvis, W.E., An Investigation of a Comparison of Ninth Grade High School Students and Vocational School Students on Self Concept and Family Socio-Economic Status in Northeastern Connecticut, University of Connecticut, 1970.

[2] _____. Report of Task Force 1 to Connecticut Commision for Higher Education, 1971.

The enrollment process, though varying from school to school, seems to result in a rather consistent pattern of the better academic students being enrolled. It cannot be said that the results of this study can be generalized to every school. In all likelihood they can't. A comparative study of schools could show the degree to which each school varies from the norms established in this study. No effort had been made to do this, however.

An important observation about the data is that there appear to be positive relationships between variables. This is not unexpected. One would expect that students with high grades would have high achievement test scores. There would also be reason to believe that students with high achievement would be absent or tardy less frequently than lower achievement students, that they would be more highly recommended by the sending schools and be ranked on personality characteristics at higher levels than the lower achievers. Less expected, though, is that family characteristics would be so interrelated with success in school. The enrolled students came from homes where fathers and mothers had higher socio-economic status than the non-enrolled. Enrolled students were also more apt to come from smaller, more cohesive families than non-enrolled students (more cohesive in the fact that enrolled students were more likely to live with both parents than the non-enrolled).

This suggests that the admissions process creates a situation in which there is an unintentional discrimination against youth who live in environments where potentials of personal and social problems are high.

Prior to making any judgments about the clearly selective processes (only part of which is done by the school, numerous applicants select themselves "out" by not appearing--approximately 18 per cent--even though they were accepted for admission), one must understand the mission of these schools.

Unlike regular high schools regional vocational-technical schools have a much more definitive responsibility. That mission is to prepare students to enter into clearly defined occupations. Most of these occupations are fairly sophisticated and technical requiring workers of competence with average or better intellectual and performance capability. To maximize the fulfillment of that mission requires that entering students have the potential of fulfilling these criteria.

To argue that schools should change the admissions process and criteria to permit less talented students to enroll suggests not necessarily a change in mission, but that the schools modify their mission, providing for occupational training for less sophisticated, less technical jobs, thereby providing opportunities for the less talented students. This, then is a philosophical matter. Should the schools continue to fulfill their present mission which requires a selective procedure, or should they modify their mission and serve a wider range of student needs? These are only two alternatives. There are undoubtedly others. One might be a change in operation, possibly eliminating the totally self-contained program and combining forces with the regular high school. Another might be limiting enrollment to eleventh and twelfth grades. Still another might be to increase the opportunities for untalented.

A further problem which was not within the framework of this study but is exemplified by other studies is the relatively high non-completion rate.[2] This problem also raises questions about the admissions process, and the com-

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[2]Non-completion is not synonomous with dropout. It is presumed that most of these students return to a regular high school. Actual figures on non-completion are not available. We know that in 1971, 3169 ninth graders were admitted. That same year 2290 graduated, some of these being post-graduate students. If the enrollment had been relatively constant over the past four years there is a school-leaving rate of somewhere around 28 per cent.

bination of these two problems (enrollment of the more talented and the dropout rates) raises questions about the school's curriculum, atmosphere, extracurricular activities, as well as the admissions procedures themselves, or the expectations school and bureau personnel have for students. A high level of selectivity coupled with a relatively high rate of school leavers suggests that there are problems which need to be identified and studied.

It is relatively simple to search out negative factors about a school. It is also relatively easy to find benefits derived from the school's services.

The record of job placement as reported each year by the Bureau of Regional Vocational Technical Schools is indeed impressive.[3] In addition, this study shows that the schools are serving Blacks, Spanish-speaking students, and females, at least in the same proportion as they seek enrollment. The schools have made strong efforts to attract Blacks and Spanish-speaking students. These efforts, however, have not resulted in a high percentage of these groups seeking enrollment.

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[3]Fourteen and six-tenths per cent of the 1971 graduates went of to post-high school, 6.6 per cent went into service, .07 per cent could not be employed due to health or other reasons, 4.8 per cent could not be found and 74.1 per cent were available for employment. Of the 74.1 per cent, 74.8 per cent were employed in the occupation for which they received instruction, or a closely related occupation, 18.2 per cent were employed in other occupations, 1.5 per cent were employed part time, and 6.6 per cent were unemployed. This was three months after graduation. Data is from Graduate Follow-up: Statistical Data on Connecticut Students Completing Vocational Programs in 1971 (in press).

The findings of this study do not cry out for quick change. They do indicate that changes might be considered. But before quick decisions are made, a good deal of more study needs to be done.

Recommendations for further study:

1. Since the schools are providing an important service to the manpower of the state, a study should be made of whether they are serving the most important needs in Trades and Industry and perhaps some other non-industrial occupations as well.
2. More needs to be known about the students, those enrolled and those not enrolled and those who do not seek enrollment. Such questions as what are their aspirations, how well equipped are they to make occupational choices are two samples of information which could be of value in determining the future roles of the school.
3. A continuing study of the enrolled ninth graders, following them through school and onto the job, should reveal what activities or environment in the school are related to the relatively high leaving rate. What are the strong points of the school which result in successful completion on job placement?
4. An experimental research project which would permit typically non-enrolled students to enroll would help identify whether the present selective processes are really appropriate.
5. Because the school can serve less than half of those who apply, some experimental programs should be attempted which would serve the non-enrolled students. Such a project should have a research aspect built into it (some such programs are underway).

6. Since schools serve different occupational needs in different geographical locations, a continuing research program regarding students, curriculum, staff and manpower needs, ans as well as some other variables, should be established for each school.

7. A study of why non-Caucasians, females and students with special needs (in this case handicapped) do not seek enrollment in the schools needs to be made. Experimental recruitment programs might be tried.

8. If pre-enrollment testing is to be done by the schools, some devices need to be developed which will make it possible to study the influence of the tests on selection. This does not mean a uniform testing program needs to be initiated; rather, that a study be made of how influential this program is in the selective process, and its relationship to successful completion of the students. It should also be conducted so that every applicant has the chance to take the test.

9. Data from this study needs to be further analyzed to determine the interrelationships of variables, with the view of recommending selection procedures which will not unintentionally favor one group of students over another.

10. Since selection of students is not solely the province of the vocational-technical schools, a comparative analysis of the students who apply but change their minds with students rejected by the school would give more definitive information of the impact of the admissions processes on the nature of the student body.

APPENDIX A

APPLICATION FORM

Form VT 50—Rev '65

CONNECTICUT STATE DEPARTMENT OF EDUCATION
Division of Vocational Education

APPLICATION FOR ADMISSION - DAY COURSE

For Technical School Use Only	
Trade	
Class	
Accepted	
Waiting List	
Deferred	

Howell Cheney Regional Vocational-Technical School
791 W. Middle Turnpike
Manchester, Connecticut 06040

ETHNIC GROUP
___CUBAN
___MEXICAN-AMER.
___NEGRO

RACE
___WHITE
___BLACK
___AM. INDIAN

___OTHER

PART I (To be Printed IN INK by the APPLICANT)

Name ..... (Last) (First) (Middle)
Address .....
Town ..... Telephone .....
Present School .....
Grade .....Town .....

If not in school:

Highest grade completed .....
School .....
Town .....
Date left .....
Reason .....
.....

Trade you wish to learn .....
In what other trade are you interested .....
Place of birth .....
Date of birth .....
Hobbies .....
.....
Number of brothers (older) .....(younger) .....
Number of sisters (older) .....(younger) .....
If not living with parents, with whom are you living
Name .....
Address .....
Town .....Relationship .....

Signature of Applicant .....Date .....

PART II (To be completed IN INK by parents or guardian with whom applicant lives)

Within the limits of its training facilities, the school accepts applicants who show promise of being able to do the work and to complete the vocational education program. The data requested on this form, together with the test which the applicant may be asked to take, will provide the information needed to act on this application.

I approve this application and agree to encourage punctuality and regular attendance.

I agree to permit the required physical examination which may include blood and tuberculosis tests and vaccination against small-pox.

I understand that the school assumes no responsibility for accidental injury suffered by a student at any time. Student Accident Insurance is available through the school.

I understand that each student is to have shop and gym clothing as prescribed and to have by a specified time certain tools as listed for his trade. Such items are the personal property of the student and are taken with him when he leaves school.

Signature ..... Relationship ..... (Father, stepfather, uncle, guardian, etc.)
Kind of work ..... Employer .....
Signature ..... Relationship ..... (Mother, stepmother, aunt, guardian, etc)
Kind of work ..... Employer .....

Name of applicant ..... (Last) ..... (First) ..... (Middle)

PART III (To be filled in by sending school)

The information below will assist us in making tentative acceptance. A record of final marks will be requested at the end of the school year for those accepted.

RECENT STANDARDIZED TESTS

	Name	Date	Grade	IQ
Intelligence Tests				

Achievement Test ..... Grade .....

Date ..... Total Grade Equivalence .....

AREA	Grade Equiv.	AREA	Grade Equiv.

Aptitude Test: ..... Grade ..... Date .....

AREA	Percentile	Score	AREA	Percentile	Score

Other Tests	Date	Grade	Score

Which grade(s) has applicant repeated? .....

Does applicant have any physical handicap? Yes ..... No .....

If yes, please explain: .....

.....

.....

.....

Birthdate as recorded on school records. .....

Environmental or other factors we should know to help the applicant in making the best possible adjustment: .....

.....

.....

.....

Signature .....
(teacher, counselor, principal)

PERSONAL CHARACTERISTICS

Please check applicant on each characteristic:

	Superior	Above Average	Average	Below Average	Unsatisfactory
Effort					
Behavior					
Responsibility					
Punctuality					
Cooperation					

ACHIEVEMENT RECORD

TRANSCRIPT ACCEPTED		Marking Periods (Omit if final grade given)					
Subject	Grade	I	II	III	IV	V	Final
Days Absent							
Days Tardy							

Type of program (coll. prep., general, etc.) .....

Lowest passing grade is .....

Applicant should satisfactorily complete Grade .....

on (date) ....., except as noted:

.....

RECOMMENDATION OF SENDING SCHOOL

Applicant is recommended highly .....

Applicant is recommended with qualifications .....

Applicant is not recommended .....

Comments: .....

.....

.....

.....

.....

.....

School ..... Date .....

FOR TECHNICAL SCHOOL USE ONLY

APPENDIX B

DATA COLLECTION FORM

CODE	ITEM	COL#	
DECK	Deck# _____	1	⌊⌋
IDNO	Stud.# _____	2-5	⌊⌋⌊⌋⌊⌋⌊⌋
TESCH	Tech.School _____	6,7	⌊⌋⌊⌋
SEX	Sex 1. male 2. female	8	⌊⌋
STATS	Status 1. admitted 2. not admitted	9	⌊⌋
APDAT	Application-date rec'd. mo. ____ / ____ yr.	10-13	⌊⌋⌊⌋⌊⌋⌊⌋
RACE	Race 1. black 2. Puerto Rican 3. Caucasian	14	⌊⌋
	blank _____	15	⌊⌋
HOME	Town(res.) zip code _____	16-20	⌊⌋⌊⌋⌊⌋⌊⌋⌊⌋
SNDSC	Sending School _____	21-25	⌊⌋⌊⌋⌊⌋⌊⌋⌊⌋
GRADE	Grade at applic. _____	26	⌊⌋
SNSCH	Town of school _____	27-31	⌊⌋⌊⌋⌊⌋⌊⌋⌊⌋
LRDCP	Last Comp. grade _____	32	⌊⌋
REASL	Reason for Leaving _____	33,34	⌊⌋⌊⌋
TRAD1	Trade(1st choice) _____	35,36	⌊⌋⌊⌋
TRAD2	Trade(2nd choice) _____	37,38	⌊⌋⌊⌋
	blank _____	39,40	⌊⌋⌊⌋
BTHPL	Birthplace (zip code) _____	41-45	⌊⌋⌊⌋⌊⌋⌊⌋⌊⌋
BIRDA	Birthdate ____ / ____ / ____	46-51	⌊⌋⌊⌋⌊⌋⌊⌋⌊⌋⌊⌋
HOBY1	Hobby 1 _____ 1.model bldg 2. collecting 3. electricity 4. wood 5. music	52-54	⌊⌋⌊⌋⌊⌋
HOBY2	Hobby 2 _____		
HOBY3	Hobby 3 _____		
OLDBR	No. of older brothers _____	55	⌊⌋
OLDSR	No. of older sisters _____	56	⌊⌋
YNGBR	No. of younger brothers _____	57	⌊⌋
YNGSR	No. of younger sisters _____	58	⌊⌋

Stud.#_____

LIVW Living with whom? 1. parents 5. m.&stepfath. 59,60 /_/_/
2. mother only 6. f.&stepmoth.
3. father only 7. guardian
4. grandparents 8. adopted

FATOC Father's occupation_____61,65 /_/_/_/_/_/

FATEM Father's employer_____66,67 /_/_/

MOTOC Mother's occupation_____68-72 /_/_/_/_/_/

MOTEM Mother's employer_____73,74 /_/_/

HONOT Home environment not typical_____75 /_/

Intelligence Test

Name	Date	Grade	IQ

IQTNA Name of IQ test_____8-12 /_/_/_/_/_/

IQDMO Date of test (month)_____13,14 /_/_/

IQDYR Date of test (year)_____15,16 /_/_/

IQGRD Grade IQ test taken in_____17 /_/

IQSCR IQ score_____18-20 /_/_/_/

ACNAM Achievement test name_____21-25 /_/_/_/_/_/

ACGRD Grade achievement test taken in_____26 /_/

ACDMO Date of test (month)_____27,28 /_/_/

ACDYR Date of test (year)_____29,30 /_/_/

ACTGE Total grade equivalent_____31,32 /_/_/

udent #_____

	Achievement Test Area	G.E.	
A1		33,34	/_._/
A2		35,36	/_._/
A3		37,38	/_._/
A4		39,40	/_._/
A5		41,42	/_._/
A6		43,44	/_._/
A7		45,46	/_._/
A8		47,48	/_._/
A9		49,50	/_._/
A10		51,52	/_._/

NAM	Aptitude test_____	/_/_/_/_/_/
GRD	Grade aptitude test taken in_____	/_/
TMO	Date of test (month)_____	/_/_/
TYR	Date of test (year)_____	/_/_/

	Aptitude Test Area	Percentile	Score	
A1				/_/_/
A2				/_/_/
A3				/_/_/
A4				/_/_/
A5				/_/_/
A6				/_/_/
A7				/_/_/
A8				/_/_/

Student #_____

GRRPT	Grade(s) repeated_____	53	⌊_⌋
PHSHA	Physical handicaps 1. Eyesight 2. Hearing 3. Limbs		
	4. Other_____	54	⌊_⌋
ENVIR	Environmental factors_____	55,56	⌊_⌋⌊_⌋
	_____		
	_____		
CHARA	Personal characteristics ⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋	57-61	⌊_⌋⌊_⌋⌊_⌋⌊_⌋⌊_⌋

Effort	5. Superior
Behavior	4. Above average
Responsiblity	3. Average
Punctuality	2. Below average
Cooperation	1. Unsatisfactory

Achievement Records - Sending School

GRADE	Grade_____		62	⌊_⌋
READ	Reading	_____	63	⌊_⌋
ENG	English (Language arts)	_____	64	⌊_⌋
SPELL	Spelling	_____	65	⌊_⌋
SCI	Science	_____	66	⌊_⌋
MATH	Math (Arithmetic)	_____	67	⌊_⌋
SS	Social Studies (History)	_____	68	⌊_⌋
GEO	Geography	_____	69	⌊_⌋
MUSIC	Music	_____	70	⌊_⌋
ART	Art	_____	71	⌊_⌋
IA	Industrial Arts	_____	72	⌊_⌋
PHYED	Physical Education	_____	73	⌊_⌋
	_____	_____	74	⌊_⌋
	_____	_____	75	⌊_⌋
	_____	_____	76	⌊_⌋

Student #_____

DAYAB	Days absent _____	77,78	
TTRDY	Times tardy _____	79,80	
LPGR	Lowest passing grade _____		
TYPPR	Type of program 1. General 2. College 3. _____	8	
RCCSS	Recommendations of sending school 1. highly 2. qualified 3. not recommend	9	
	Comments:_____		
	_____		
	_____		
ENTGR	Entered at grade 9, 10, 11, 12	10	
ENTMO	Date entered (month) __/__	11,12	
ENTDA	Day of entry	13,14	
ENTYR	Year of entry	15,16	
LEFMO	Date left (month) __/__	17,18	
LEFDA	Day of leaving	19,20	
LEFYR	Year of leaving	21,22	
REASL	Reason for leaving_____	23,24	
	Blank_____	25	
ENTEN	Entrance test name_____	26	
DETMO	Date of entrance test (mo.)_____/_____(yr.)	27,28	
DETYR		29,30	
PARAM	Paragraph meaning_____%	31,32	
ARTHM	Arithmetic comprehension_____%	33,34	
ENTET	Entrance test name_____		
DENMY	Date of entrance test (mo.)_____/_____(yr.)		
	_____		
	_____		

Student #_____

Ninth Grade Marks - 9/71 to 3/72

TRADE	Trade_____	35	/_/
TPER	Trade performance_____	36	/_/
TATT	Trade attitude _____	37	/_/
TTPER	Trade theory _____	38	/_/
TTATT	_____	39	/_/
MPER	Math _____	40	/_/
MATT	_____	41	/_/
SPER	Science _____	42	/_/
SATT	_____	43	/_/
EPER	English _____	44	/_/
EATT	_____	45	/_/
SSPER	Social Studies _____	46	/_/
SSATT	_____	47	/_/
BRPER	Blueprint reading_____	48	/_/
BRATT	_____	49	/_/
PEPER	Phys. ed. _____	50	/_/
PEATT	_____	51	/_/
	Extra _____	52	/_/
	Extra _____	53	/_/
DYABS	Days absent _____	54,55	/_/_/
TTRDY	Times tardy _____	56,57	/_/_/
HNRR	Honor roll _____		/_/_/
	Trade choice after exploration		
TCAE1	#1_____	58,	/_/
TCAE2	#2_____	59	/_/
RFTCC	Reason for trade choice change_____	60,61	/_/_/

7

tudent #_____

CRD Counseling record ____

TCS Parent conferences ____

SAS Activities and Awards ____

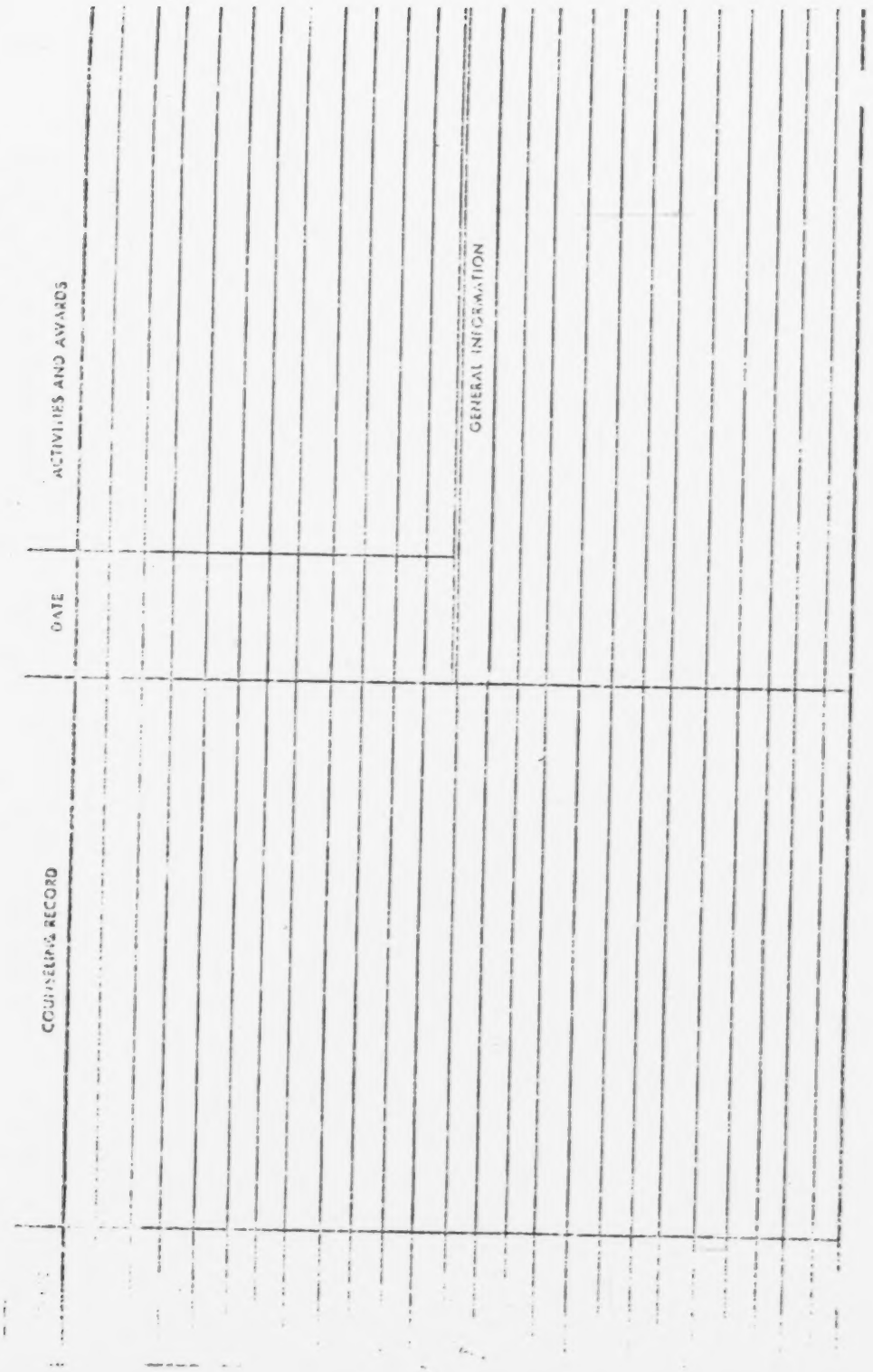
LIN General information ____

APPENDIX C

CUMULATIVE RECORD FORM

CUMULATIVE RECORD

(PART I)



CUMULATIVE RECORD
(PART II)

EVALUATIVE DATA

TRANSCRIPTS FURNISHED			COMMENTS FROM PREVIOUS SCHOOL
LAST	TO	FOR	

DATE	PARENT CONFERENCES	PREVIOUS SCHOOL RECORDS
		GRADES REPEATED

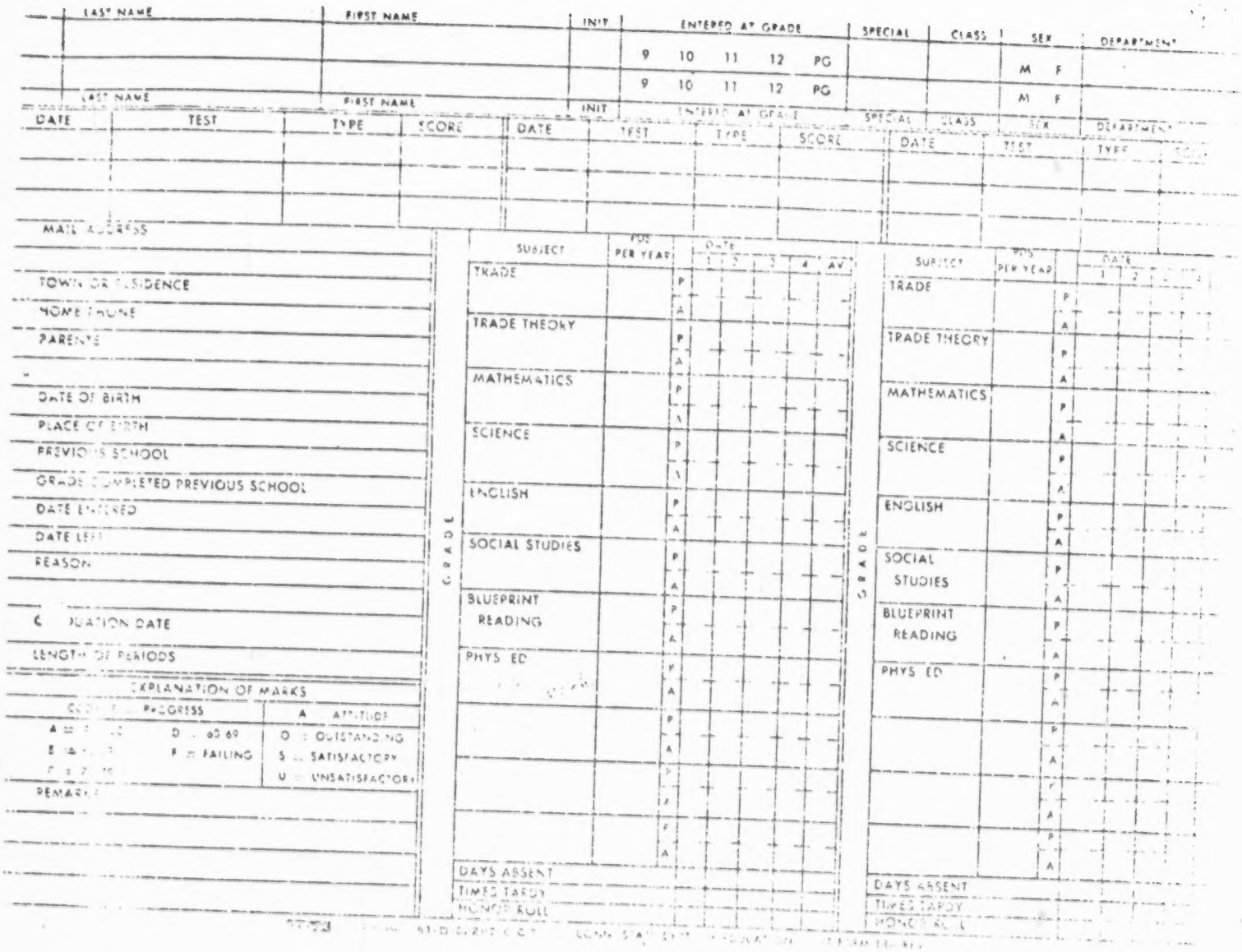
PHOTO

HOME INFORMATION

HOME ADDRESS		TOWN
MAIL ADDRESS		PHONE
LIVES WITH		HOW LONG
FATHER	OCCUP.	EMPL.
MOTHER	OCCUP.	EMPL.
GUARDIAN	RELATIONSHIP	EMPL.
OLDER BROS.	YOUNGER BROS.	OLDER SISTERS — YOUNGER SISTERS
OTHER		

LAST NAME	FIRST NAME	INIT	ENTERED AT GRADE					SPECIAL	CLASS	SEX		DEPARTMENT
			9	10	11	12	PG.			M	F	
			9	10	11	12	PG.			M	F	
LAST NAME	FIRST NAME	INIT	ENTERED AT GRADE					SPECIAL	CLASS	SEX		DEPARTMENT

CUMULATIVE RECORD
(PART III)



LAST NAME	FIRST NAME	INIT	ENTERED AT GRADE	SPECIAL	CLASS	SEX	DEPARTMENT
			9 10 11 12 PG			M F	
			9 10 11 12 PG			M F	

DATE	TEST	TYPE	SCORE	DATE	TEST	TYPE	SCORE	DATE	TEST	TYPE	SCORE

MAIL ADDRESS

TOWN OF RESIDENCE

HOME PHONE

PARENTS

DATE OF BIRTH

PLACE OF BIRTH

PREVIOUS SCHOOL

GRADE COMPLETED PREVIOUS SCHOOL

DATE ENTERED

DATE LEFT

REASON

GRADUATION DATE

LENGTH OF PERIODS

EXPLANATION OF MARKS

PROGRESS

A = 90-100 D = 65-69

B = 80-89 F = FAILING

C = 70-79

ATTITUDE

O = OUTSTANDING

S = SATISFACTORY

U = UNSATISFACTORY

REMARKS

GRADE

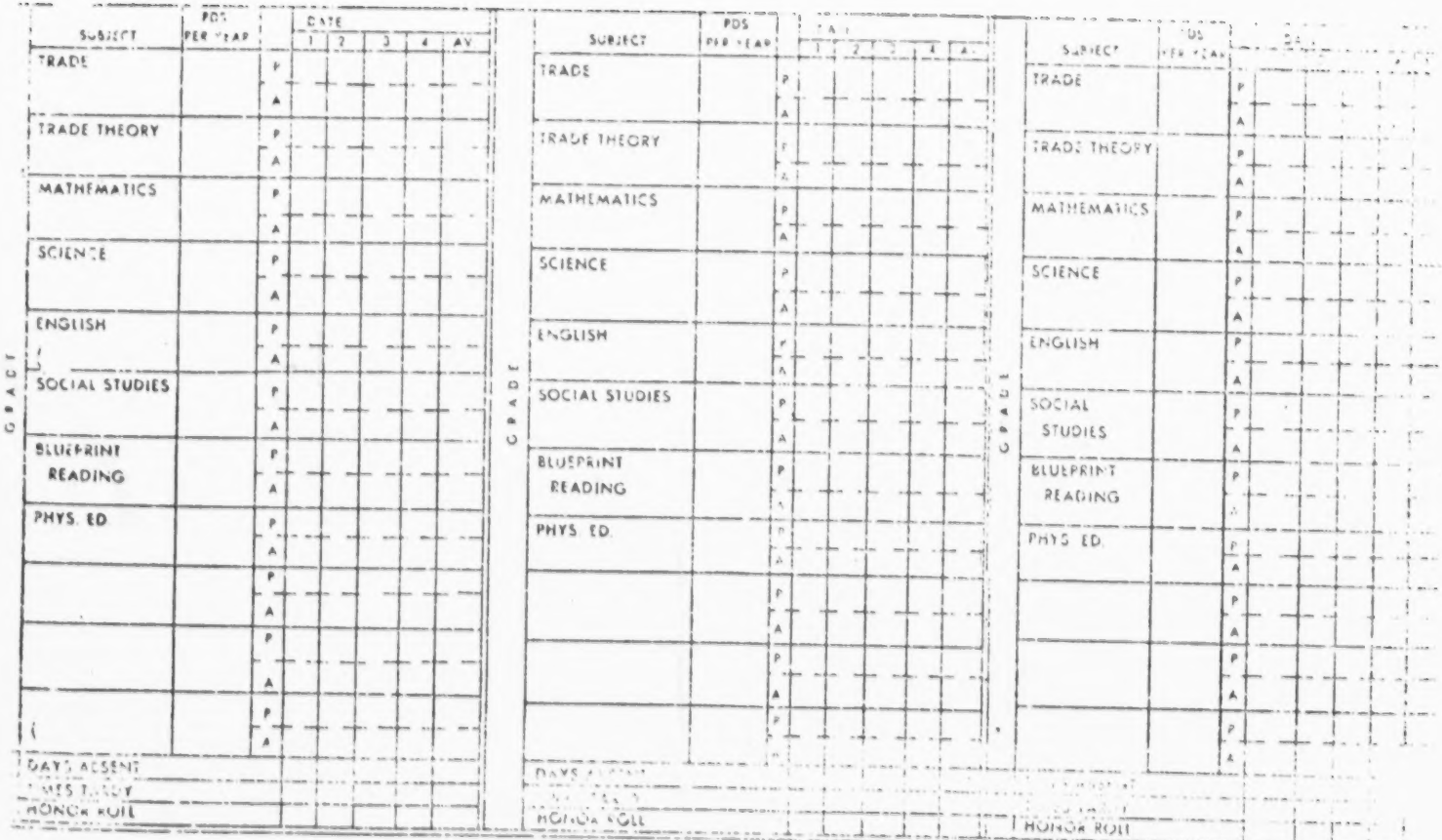
SUBJECT	PDS PER YEAR		DATE 1	2	3	4	AV
TRADE		P					
		A					
TRADE THEORY		P					
		A					
MATHEMATICS		P					
		A					
SCIENCE		P					
		A					
ENGLISH		P					
		A					
SOCIAL STUDIES		P					
		A					
BLUEPRINT READING		P					
		A					
PHYS ED		P					
		A					
		P					
		A					
		P					
		A					
		P					
		A					
DAYS ABSENT							
TIMES TARDY							
HONOR ROLL							

GRADE

SUBJECT	PDS PER YEAR		DATE 1	2	3	4	AV
TRADE		P					
		A					
TRADE THEORY		P					
		A					
MATHEMATICS		P					
		A					
SCIENCE		P					
		A					
ENGLISH		P					
		A					
SOCIAL STUDIES		P					
		A					
BLUEPRINT READING		P					
		A					
PHYS ED		P					
		A					
		P					
		A					
		P					
		A					
		P					
		A					
DAYS ABSENT							
TIMES TARDY							
HONOR ROLL							

OCCUPATIONAL RECORD

(PART IV)



SUBJECT	PDS PER YEAR	DATE 1	2	3	4	AV.
TRADE		P / A				
TRADE THEORY		P / A				
MATHEMATICS		P / A				
SCIENCE		P / A				
ENGLISH		P / A				
SOCIAL STUDIES		P / A				
BLUEPRINT READING		P / A				
PHYS. ED.		P / A				
		P / A				
		P / A				
		P / A				
DAYS ABSENT						
TIMES TARDY						
HONOR ROLL						

GRADE

SUBJECT	PDS PER YEAR	DATE 1	2	3	4	AV.
TRADE		P / A				
TRADE THEORY		P / A				
MATHEMATICS		P / A				
SCIENCE		P / A				
ENGLISH		P / A				
SOCIAL STUDIES		P / A				
BLUEPRINT READING		P / A				
PHYS. ED.		P / A				
		P / A				
		P / A				
		P / A				
DAYS ABSENT						
TIMES TARDY						
HONOR ROLL						

GRADE

SUBJECT	PDS PER YEAR	DATE 1	2	3	4	AV.
TRADE		P / A				
TRADE THEORY		P / A				
MATHEMATICS		P / A				
SCIENCE		P / A				
ENGLISH		P / A				
SOCIAL STUDIES		P / A				
BLUEPRINT READING		P / A				
PHYS. ED.		P / A				
		P / A				
		P / A				
		P / A				
DAYS ABSENT						
TIMES TARDY						
HONOR ROLL						

SCHOOL _____ SIGNATURE _____ RANK IN GRAD. CLASS